CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2006-____

WASTE DISCHARGE REQUIREMENTS
AND
MASTER RECLAMATION PERMIT

FOR

CITY OF LATHROP
WASTEWATER RECYCLING PLANT
SAN JOAQUIN COUNTY

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Regional Water Board) finds that:

1. On 14 February 2006, the City of Lathrop submitted a Report of Waste Discharge (RWD) and a Title 22 Engineering Report for a wastewater treatment facility to treat and dispose of domestic wastewater generated in existing and planned residential and commercial developments within the City of Lathrop. Additional information was received on 10 May 2006.

2. The City of Lathrop is hereafter referred to as "Discharger." Land discharge areas are owned by the Discharger or by other entities. These Waste Discharge Requirements (WDRs) were prepared as part of a Master Reclamation Permit described by California Water Code Section 13523.1(b)(1).

3. This Order describes the existing wastewater treatment system and proposed expansions. Proposed wastewater treatment facility mechanical components will be constructed in two nearby but separate areas. The system will consist of Water Recycling Plant No. 1 (WRP-1) and Water Recycling Plant No. 2 (WRP-2); collectively they are named the City of Lathrop Water Recycling Plant (WRP). The WRP also includes the wastewater collection system, the recycled water storage ponds, the recycled water delivery system, and all the recycled water land application areas. WRP-1 exists presently and can treat up to a monthly average flow rate of 0.75 Million Gallons per Day (MGD). The existing facility is regulated by WDRs Order No. R5-2005-0045. However, Order No. R5-2005-0045 will be rescinded by this Order, and both WRP-1 and WRP-2 will be regulated by this Order.

4. The WRP treatment facilities are located adjacent to the existing City of Lathrop Crossroads Wastewater Treatment Facility (Crossroads Plant), but the two facilities do not and will not share equipment or storage ponds with the exception of sludge dewatering equipment. The Crossroads Plant is regulated by WDRs Order No. 5-01-251 and will continue to be regulated by that Order.

5. The general location of the WRP treatment facilities is shown in Attachment A, which is attached hereto and made part of this Order by reference. The WRP treatment facilities are located at 19094 Christopher Way, Lathrop, in Section 35, T1S, R6E and Section 2, T2S, R6E, MDB&M.

6. The Discharger owns the mechanical treatment system and the land where it is located. The WRP treatment facilities site plan is shown on Attachment B, which is attached hereto and made part of this Order by reference.

7. The Discharger plans to expand the treatment capacity of WRP-1 from 0.75 to 3.12 MGD on a monthly average flow basis. Expansions of WRP-1 beyond 3.12 MGD monthly average flow rate are not authorized by this Order.

8. The Discharger plans to build WRP-2, which at build out will also have a 3.12 MGD capacity. WRP-2 will employ equivalent treatment as WRP-1. Expansions of WRP-2 beyond 3.12 MGD monthly average flow rate are not authorized by this Order.

9. Recycled water is defined in CWC Section 13050 and in Title 22 Section 60301.230 (disinfected tertiary recycled water). The treatment at this facility complies with the definitions in both documents. Recycled water will be stored in lined storage ponds and applied to land application areas. Land application areas will consist of landscaped areas, turf areas, agricultural crop areas, and may include infiltration basins. Several developers own some of the existing and proposed recycled water storage pond sites and land application areas, which they will transfer ownership of, or lease the land, to the Discharger. As operator of the recycled water system and permitee named in this Master Reclamation Permit, the City of Lathrop is responsible to maintain the minimum land application area acreage and recycled water storage pond capacity as defined in this Order. This Order allows land application only to those areas subject to review in a final document adopted pursuant to the California Environmental Quality Act (CEQA) and prior to the date of adoption of this Order.

10. This Order allows the Discharger flexibility in changing the size and use of land areas for recycled water storage or land application. Prior to changes to the current configuration for recycled water storage or land application, the Discharger must submit Recycled Water Expansion Reports (RWERs) that will be approved, as appropriate, by the Executive Officer. Any changes in size and use of land areas for recycled water storage or application may only occur in areas subject to a CEQA document that was adopted prior to the adoption date of this Order.

11. The Discharger has previously stated that, as development increases, it expects to apply for a National Pollutant Discharge Elimination System (NPDES) permit to allow recycled water discharge to surface waters. Issuance of this Order for a discharge of recycled water to land does not guarantee that the Discharger will obtain an NPDES permit. In addition, issuance of this Order does not guarantee a future increase in capacity beyond the initial monthly average flow of 0.75 MGD allowed by this Order.

12. Upon submittal of technical reports that are approved by the Executive Officer, wastewater flow rates may increase but this Order does not authorize increases in flow beyond 6.24 MGD capacity.

Existing Facilities

13. The existing facility (WRP-1) treats wastewater from two new residential and commercial developments. These developments are named River Islands, which is located within Stewart Tract, and Mossdale Landing. The developments are being constructed in phases; the initial development will produce approximately 0.75 MGD of wastewater from residential and commercial sources.

14. Until recently, wastewater from the new developments was discharged to the City of Manteca collection system. As a result, only two months of wastewater quality monitoring data is available from the Mossdale Landing service area. Based on wastewater generated in the existing residential development north of Louise Avenue within the City of Lathrop (which continues to be treated by the City of Manteca wastewater system), the raw wastewater characteristics anticipated are presented below. Because the Mossdale Landing constituent concentrations are low, significant inflow and/or infiltration is believed to be occurring relative to the current wastewater flowrate.

Constituent	Units	Louise Avenue Average	Mossdale Landing Average
Biochemical Oxygen Demand	mg/L	330	149 [2]
Total Suspended Solids	mg/L	330	48.5 [2]
Total Kjeldahl Nitrogen	mg/L	36	Not Available
Total Dissolved Solids	mg/L	525 [1]	525 [1]

[1] Total Dissolved Solids (TDS) estimate based on municipal supply TDS plus 200 mg/L. Municipal supply data from Table 5, November 2004 RWD prepared by RMC, Appendix 2, Groundwater Assessment Report 11/29/04, prepared by Hydrofocus.

[2] Mossdale Landing Averages based on May and June 2006 self-monitoring reports.

15. According to the RWD, the existing mechanical treatment portion of WRP-1 is designed for the following flow conditions:

Parameter	Units	Flow Rate
Existing Facilities Monthly Average Flow (dry weather)	MGD	0.75
Existing Facilities Peak-Month Flow	MGD	0.94
Existing Facilities Peak-Day Flow	MGD	1.13
Existing Facilities Peak-Hour Flow	MGD	1.875

16. The existing treatment facilities at WRP-1 include fine screening, grit removal, influent pumping, influent equalization, nitrification/denitrification activated sludge by means of a Membrane Biological Reactor (MBR), chlorine disinfection, and effluent pumping.

17. Screenings and grit removed from wastewater are dewatered and placed in a dumpster, prior to being hauled off-site to the local landfill for disposal. Waste Activated Sludge (WAS) is stored in a WAS storage tank and dewatered using a belt filter press. Dewatered sludge is hauled to Brisco Enterprises in Merced for subsequent land application under Waste Discharge Requirements Order No. 94-030. A process flow schematic is presented in Attachment C, which is attached hereto and made part of this order by reference.

18. Currently, effluent is disinfected using a sodium hypochlorite solution in a chlorine contact tank that provides more than 90 minutes of modal detention time. Sodium hypochlorite is stored in two 5,000-gallon tanks. Two metering pumps (one operating and one backup) provide for chemical disinfection; a third dosing pump supplies sodium hypochlorite for membrane cleaning and Clean in Place (CIP) use.

19. Treated wastewater is discharged to Pond S4, which provides approximately 10.9 Mgal (33.4 ac-ft) of storage, or Pond S5, which provides approximately 28.5 Mgal (87.5 ac-ft) of storage. Both ponds are located at WRP-1, as shown in Attachment B. However, if disinfection fails, wastewater cannot bypass discharge into either pond. Therefore, this Order requires a bypass and emergency storage system to be installed.

20. The system manufacturer recommends a membrane maintenance cleaning procedure every one to two weeks. During maintenance cleaning, a timed backwash is initiated and a concentration of sodium hypochlorite (approximately 200 mg/L) is injected into the membrane fibers. The membranes are allowed to soak for 15 minutes and then another timed backwashing with solution is performed. The membrane maintenance cleaning operation consists of three cycles of backwashing/soaking and requires a total of about 18 gallons of sodium hypochlorite solution.

21. A more thorough CIP procedure is performed when flow through the membranes begins to become restricted due to membrane fouling. The operation will typically be needed once every three to six months and the length of the chemical clean cycle lasts from three to six hours. The chlorine concentration required for a membrane CIP operation is 1,000 mg/L and each procedure uses a total of approximately 74 gallons of sodium hypochlorite solution. The waste sodium hypochlorite solution will be pumped back into the plant for subsequent treatment over a one-day period. The Discharger has estimated the resulting TDS concentration increase is approximately 9.7 mg/L at a flow rate of 750,000 gpd.

22. A 950,000 gallon steel tank provides diurnal flow equalization and short-term emergency storage. Wastewater in the tank is automatically returned to the influent pump station as treatment capacity becomes available.

23. Standby equipment at the facility includes redundant pumping and storage. All pumps, valves, instruments, and alarms are monitored by a SCADA system. Standby power has been designed to provide continuous treatment during a power outage. In the event that monitoring instrumentation detects an increase in effluent turbidity that may indicate a leak within the membrane systems, the filtrate pumps automatically de-energize, stopping the discharge. Influent wastewater is directed to the storage tank while the operators determine the source of the elevated turbidity.

24. Stormwater that falls on the treatment plant is collected and directed into an on-site stormwater retention pond. The Discharger is required to apply for coverage under the NPDES stormwater permitting program.

25. The Discharger estimates that the quality of the effluent will be as described below.

Constituent [1]	Units	Monthly Average	Daily Maximum
BOD	mg/L	≤10	≤20
TSS	mg/L	≤10	--
Turbidity	NTU	--	≤0.2
TN	mg/L	≤10	≤20
TCO	MPN/100 mL	≤2.2	--
pH	Std. Unit	6.5-8.5	--
TDS	mg/L	525	--

[1] BOD denotes Biochemical Oxygen Demand. TSS denotes Total Suspended Solids. TN denotes Total Nitrogen. TCO denotes Total Coliform Organism. NTU denotes Nephelometric Turbidity Units. MPN denotes Most Probable Number. TDS denotes Total Dissolved Solids.

26. As required by Water Code Section 13523.1, the existing treatment facilities and estimated effluent quality comply with the requirements of Title 22 of the California Code of Regulations for disinfected tertiary recycled water (hereafter recycled water), including the submission of an Engineering Report to the Department of Health Services (DHS) documenting how full compliance is achieved. DHS provided comments on the Engineering Report in a 28 April 2006 letter; these WDRs implement the comments.

Existing Recycled Water Storage Basins and Land Application Areas

27. Recycled water is discharged from the wastewater treatment plant to Pond S4 and/or S5 (both of which are located at the WRP-1 site). The effluent/irrigation pump station located next to Pond S4 pumps the recycled water stored in Ponds S4 or S5 to off-site storage ponds or land application areas.

28. A Recycled Water Expansion Report – Phase 2 was submitted to the Regional Water Board in February 2006 in the *City Of Lathrop Water Reclamation Plant 1 MBR Expansion Facility, Recycled Water Expansion Report – Phase 2* (RWER) prepared by Nolte Associates, Inc.

a. The water balance presented in the February 2006 RWER presented the minimum recycled water storage volume and land application area needed for the existing 0.75 MGD average monthly flow rate capacity under 100-year return annual total rainfall conditions. The minimum and the available storage capacity, as well as the existing land application area, is presented in the table below:

Parameter	Minimum	Available
Storage Capacity	127.4 Mgal	150.7 Mgal
Land Application Area	173.0 acres	182.9 acres

Mgal denotes Million Gallons

29. The locations of existing storage ponds used to store recycled water when not irrigating are shown in Attachment D.1 and D.3, which are attached hereto and made part of this order by reference. The table below presents a listing of all existing recycled water storage ponds and associated capacities.

Pond I.D.	Capacity (Mgal)
S1	40.9
S2	15.3
S3	21.0
S4	10.9
S5	28.5
S6	34.1
Total	**150.7**

MGal denotes Million Gallons

30. All the recycled water storage ponds are lined with at least a 40-mil high-density polyethylene liner to minimize percolation. The City of Lathrop has adopted *Water and Recycled Water System Standards* that require wastewater storage ponds to be lined with a synthetic liner. As part of this Master Reclamation Permit, and in accordance with CWC Section 13523.1(b)(3), the Discharger must establish and enforce rules or regulations for recycled water users.

31. Recycled water is applied to land application areas by drip irrigation, flood irrigation, or sprinklers at agronomic rates for both nitrogen and water application. Irrigation tailwater is controlled through such measures as perimeter berms, grading of the area to prevent off-site drainage, and/or management controls. This Order allows application of recycled water only to land application areas that have been subject to review in CEQA documents that have been adopted prior to the date of adoption of this Order. Application of recycled water to land application areas or recycled water storage ponds, not currently used for such purposes, requires approval of an RWER by the Executive Officer prior to wastewater application.

32. The existing recycled water land application areas are located on numerous parcels. Approximately 183 acres of land application areas are currently available for recycled water application. The locations of the land application areas are presented in Attachments D.1, D.2, and D.3. Specific data on these existing land application areas are presented in the table below.

I.D.	Total Area (acres)	Irrigated Area (acres)	Land Use	Vegetation Irrigated	Location	Owner	CEQA[a]
A 23	12.40	11.52	Agricultural	Crop	Service Commercial	City	MLE
A 28	33.70	30.63	Agricultural	Crop	S.W. River Islands	Califia LLC	RI
A 30	39.20	35.50	Agricultural	Crop	N. River Islands	Califia LLC	WRP-1
A 31	98.80	94.70	Agricultural	Crop	N. River Islands	Califia LLC	WRP-1
L 08	3.36	3.36	Park	Turf	River Park North	City	UDC
L 09	0.05	0.05	Median	Trees, Shrubs	Hidden Cove Place	City	UDC
L 10	0.21	0.21	Parkway	Turf, Trees	Grass Valley Pkwy	City	UDC
L 11	0.74	0.74	Parkway	Turf, Trees	Grass Valley Pkwy	City	UDC
L 12	0.05	0.05	Median	Trees, Shrubs	Marsh Road	City	UDC
L 13	0.45	0.45	Parkway	Turf, Trees	Barbara Terry Pkwy	City	UDC
L 15	0.10	0.10	Parkway	Turf, Trees	Barbara Terry Pkwy	City	UDC
L 16	0.23	0.23	Parkway	Turf, Trees	McKee Blvd	City	UDC
L 17	0.04	0.04	Median	Trees, Shrubs	McKee Blvd	City	UDC
L 18	0.26	0.26	Parkway	Turf, Trees	Barbara Terry Pkwy	City	UDC
L 21	0.29	0.29	Parkway	Turf, Trees	Barbara Terry Pkwy	City	UDC
L 23	0.14	0.14	Parkway	Turf, Trees	McKee Blvd	City	UDC
L 24	0.91	0.91	Parkway	Turf, Trees	River Islands Pkwy	City	UDC
L 25	0.04	0.04	Median	Trees, Shrubs	McKee Blvd	City	UDC
L 26	0.40	0.40	Median	Trees, Shrubs	River Islands Pkwy	City	UDC
L 27	0.75	0.75	Park	Turf Grass	The Green	City	UDC
L 28	0.32	0.32	Parkway	Turf, Trees	McKee Blvd	City	UDC
L 29	0.34	0.34	Parkway	Turf, Trees	McKee Blvd	City	UDC
L 30	0.10	0.10	Median	Trees, Shrubs	McKee Blvd	City	UDC
L 31	0.09	0.09	Median	Trees, Shrubs	McKee Blvd	City	UDC
L 32	0.04	0.04	Median	Trees, Shrubs	Village Ave	City	UDC
L 33	0.06	0.06	Median	Trees, Shrubs	Village Ave	City	UDC
L 34	1.05	1.05	Park	Turf Grass	Mossdale Commons	City	UDC
L 35	0.10	0.10	Median	Trees, Shrubs	Towne Centre	City	UDC
L 36	0.10	0.10	Median	Trees, Shrubs	Towne Centre	City	UDC
L 37	0.03	0.03	Median	Trees, Shrubs	Village Ave	City	UDC
L 42	0.31	0.31	Parkway	Turf, Trees	Brookhurst Blvd	City	UDC
Total		**182.91**					

[a] MLE denotes Mossdale Landing East EIR, RI denotes River Islands Disposal Fields Expansion, WRP-1 denotes Lathrop Water Recycling Plant No. 1, Phase 1 Expansion, UDC denotes Mossdale Landing Urban Design Concept EIR

Proposed Expansions and Modifications to WRP-1 Treatment Facilities

33. WRP-1 will be expanded to increase the monthly average flow rate limit from 0.75 MGD to 1.56 MGD to accommodate additional wastewater from continuing development. This expansion is scheduled to be completed by the end of 2007 and will involve the following:

- An additional screen and compactor system with a maximum capacity of 3.75 MGD.
- An additional MBR system rated for 0.78 MGD.
- An Ultra Violet (UV) disinfection system rated for 1.56 MGD (the existing chlorine disinfection system will be decommissioned).
- Conversion of one of the existing chlorine storage tanks and feed system to a sodium hydroxide storage and feed system to offset alkalinity losses during the biological treatment process. The Discharger is encouraged to consider use of potassium hydroxide rather than sodium hydroxide. Potassium is more likely to be taken up by the crop in land application areas.
- A direct connection between the disinfection system and the effluent/irrigation pump station to provide the flexibility to bypass Ponds S4 and S5.
- An additional equalization/emergency storage tank with 1.075 MG capacity.
- Modifications to the WRP-1 effluent/irrigation pump station to provide the ability to divert flows to the equalization/emergency storage tanks.
- An additional belt filter press.

New WRP-2 Treatment Facilities

34. The Discharger plans to construct treatment facilities at WRP-2 to treat additional wastewater flows. The treatment process at WRP-2 will be similar to the one currently built at WRP-1 and will include fine screening, grit removal, flow measurement, influent pumping, influent equalization, emergency storage, nitrification/denitrification activated sludge by means of an MBR, UV disinfection, and effluent pumping.

35. The first phase of WRP-2 will be rated for a minimum capacity of 0.75 MGD and is expected to be operational by the end of 2007. Staff notes that WRP-1 will not have been built to the maximum flow rate of 3.12 MGD when WRP-2 is constructed. The Discharger has elected to construct WRP-2 early to allow more flexibility in wastewater treatment. Similar to WRP-1, at build-out, WRP-2 will have an ultimate capacity of 3.12 MGD.

Shared Treatment Facilities

36. WRP-1 and WRP-2 will be interconnected at the headworks for operational flexibility and influent flow allocation. They will also share the following facilities:

- Administration/laboratory building.
- Maintenance building.
- Solids dewatering building and drying pad (also shared with the Crossroads Plant).
- An emergency storage basin located next to Pond S5. The location of the basin is presented on Attachment B.

New Effluent Storage Ponds and Land Application Areas

37. The water balance included in the RWD includes more land application area acreage than required to support a 6.24 MGD capacity under 100-year rainfall conditions. This excess area is available as needed should some proposed application areas be unusable for any reason, or should land application area requirements be greater than projected under actual future field conditions. Table 5-3 of the RWD lists 134 potential future land application areas consisting of a total of 2,389 acres and Table 5-1, Addendum No. 1 identifies 1,552 MG of developable storage pond capacity.

38. The RWD states that the ultimate capacity of both treatment systems (WRP-1 and WRP-2) will be a total of approximately 6.24 MGD. Table 4-1 in the RWD uses a monthly average wastewater inflow rate of 6.24 MGD (which allows for inflow and infiltration to add 4-percent to an anticipated dry weather flow rate of 6.0 MGD) and the 100-year precipitation return annual total. The RWD estimates that 1,016 Mgal (3,118.8 ac•ft) of storage capacity is required for the 6.24 MGD flow rate. The available storage pond capacity described in the RWD is greater than 1,016 Mgal. This excess capacity will be available as needed should some existing storage ponds need to be decommissioned, some proposed storage sites be unbuildable for unanticipated reasons, or should storage requirements be greater than projected under actual future field conditions.

39. Because land application areas will consist of cropped areas, turf areas, landscaped areas (trees and shrubs), and possibly infiltration basins - each with its own evapotranspiration rate, irrigation efficiency, and leaching requirement, determining the actual land application areas that are required will be evaluated in each RWER. The RWD presented the following amounts of land application areas and the application assumptions to be the minimum acceptable capacity at a monthly average flow rate of 6.24 MGD and the storage described above:

Parameter	Units	Crop	Turf	Trees and Shrubs	Infiltration Basin
Application Area	Acres	1,254	7.5	288.9	Not Applicable
Application Rate	Inches/year	58	47.4	30.1	60

Parameter	Units	Crop	Turf	Trees and Shrubs	Infiltration Basin
Irrigation Efficiency	percent	70	75	75	Not Applicable
Leaching Requirement	percent	1.1	1.0	2.6	Not Applicable

40. Infiltration basins will only be utilized where the evapotranspirative concentration of effluent salts by vegetation may cause unacceptable degradation of shallow groundwater. Infiltration basins will receive no more than 60-inches of effluent per year to remove all incentive to use infiltration basins other than to protect underlying groundwater quality. The use of infiltration basins is subject to Executive Officer approval.

41. Additional wastewater storage ponds and land application areas will be constructed to accommodate future wastewater flow increases. As a result of continuing development in the area, some storage ponds and/or land application areas that are in use may be decommissioned or replaced by alternative facilities (e.g. land application areas converted to recycled water storage ponds). This Order allows reconfiguring facilities pursuant to the requirements contained in the Provisions of this Order, applicable CEQA documents, and Executive Officer approval of RWERs.

42. The Discharger plans to construct Pond S7 (57.4 Mgal) to replace Ponds S1 (40.9 Mgal) and S2 (15.3 Mgal). Ponds S1 and S2 will be decommissioned once Pond S7 is operational.

43. The Discharger proposes to grow crops with recycled water on some future recycled water storage pond sites until the time the ponds are constructed. The Discharger plans to landscape and irrigate with recycled water the outer surfaces of recycled water storage pond levees.

Wastewater Collection System

44. The sanitary sewer system collects wastewater and consists of sewer pipes, manholes, sewer mains, sewer pump stations, and/or other conveyance system elements and directs the raw sewage to the treatment facilities. This system will be expanded as needed to serve new developments.

45. The wastewater collection system for Mossdale Landing includes a sewer pumping station designed for a peak wet weather flow rate of 3.4 MGD. This pump station conveys wastewater to WRP-1 via 8-inch and 12-inch diameter force mains located within the right-of-way of existing or planned roadways and under Highway 5.

46. The wastewater collection system for the Central Lathrop Specific Plan area will include a sewer pumping station designed for a peak wet weather flow rate of 7.8 MGD. This pump station will convey wastewater to WRP-2 via 16-inch and 12-inch diameter force mains located within the right-of-way of existing or planned roadways and under Highway 5.

47. The wastewater collection system for River Islands will include a sewer pump station designed for a peak wet weather flow rate of 4.9 MGD. This pump station will convey wastewater to

WRP-1 via a 12-inch diameter force main located within the right-of-way of existing or planned roadways and under Highway 5.

48. Additional sewer pump stations, lift stations, and associated collection systems will be constructed in the areas not covered by the facilities described above and served by the WRP.

49. The sewer pump stations have (or will have when constructed) high water alarms and backup power generators capable of operating all the pumps in case of a power outage. Force main spill detection systems are (or will be) included and consist of flow meters at the pump stations and the treatment facility. If significant flow differential is measured, the operator will be notified. Alternatively, force main spill detection systems may be based on low-pressure predetermined set points.

50. A "sanitary sewer overflow" is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the treatment facility. Temporary storage and conveyance facilities (such as wet wells, regulated impoundments, tanks, highlines, etc.) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage/conveyance facilities. Sanitary sewer overflow is also defined in State Water Board Order No. 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*, which the Discharger must enroll under.

51. For the proposed facility, any sanitary sewer overflows would consist of varying mixtures of domestic and commercial wastewater, depending on the uses of the lands served by the sewage collection system. The chief causes of sanitary sewer overflows include grease blockages, root blockages, debris blockages, sewer line flood damage, manhole structure failures, vandalism, pump station mechanical failures, power outages, storm or groundwater inflow/infiltration, lack of capacity, and/or contractor caused blockages.

52. Sanitary sewer overflows often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen demanding organic compounds, oil and grease, and other pollutants. Sanitary sewer overflows can cause temporary exceedences of applicable water quality objectives, pose a threat to public health, adversely affect aquatic life, and impair the public recreational use and aesthetic enjoyment of surface waters in the area.

53. The Discharger is expected to take all necessary steps to adequately maintain, operate, and prevent discharges from its sanitary sewer collection system. This Order requires the Discharger to prepare and implement a *Sewer System Management Plan* (SSMP) consistent with State Water Resources Control Board (State Water Board) Order No. 2006-0003-DWQ.

54. This Order requires the Discharger to submit an Interim SSMP that includes reports that are required by the State Water Board Order. The reports are required to minimize the likelihood of an SSO in the time from adoption of this Order until self-certification of the SSMP is required by the State Board.

Site-Specific Conditions

55. Annual precipitation in the vicinity averages approximately 13.31 inches. The mean pan evaporation rate is approximately 50.8 inches per year. With the exception of some of the River Islands land application areas and potential land application area No. A26 and A27 (described in the RWD) all areas proposed for wastewater collection, treatment, storage and reclamation facilities are outside the 100-year flood zone. Land application areas will not be irrigated except as needed to meet vegetation water needs. Saturated soil will not be irrigated with recycled water.

56. The facility lies within the San Joaquin Delta Hydrologic Unit Area No. 544.00, as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.

57. Based on the National Resource Conservation Service soil survey, the soils in the proposed land application areas are sandy to silty clay loams. Published infiltration rates for the soils range from 0.06 to 6.0 in/hr.

Groundwater Considerations

58. Groundwater currently used for municipal supply typically is drawn from wells that penetrate the Laguna Formation (approximately 150 to 1,000 ft. bgs).

59. Several consultants performed the initial groundwater monitoring work for the Discharger and no standardized approach was implemented.

60. As City development progresses, some existing monitoring wells may prove to be unnecessary and/or in the way of construction activities. The RWD states that a number of the wells will be properly destroyed or relocated during construction of City infrastructure, recycled water storage ponds, or land application areas.

61. A damaged stormwater drainage pipe is locally dewatering the southern portion of the Mossdale Landing area. The broken pipe is located on the east side of Highway 5. The damaged pipe is near recycled water storage ponds and land application areas; therefore, it could allow more rapid transport of wastewater contaminants to surface water bodies and must be repaired. The Discharger has committed to repairing the damaged pipe by June 2008. Provision G.1.f of this Order requires completion of the repair. The repair will be completed before groundwater originating in the recycled water land application areas/storage ponds is likely to migrate to the drainage pipe.

62. A 26 April 2005 *Groundwater Monitoring Workplan Addendum* prepared by Hydrofocus was approved on 12 May 2005. The Addendum included a list of monitoring wells for the Mossdale Landing, River Islands, and wastewater treatment facility (WRP-1) locations. Some of the wells were used only for groundwater elevation measurements. A list of the wells and their use is provided below. The list of wells requiring chemical analysis has been modified from the 12 May 2005 approved list based on changes to the River Island land application areas which were

approved through the Executive Officer's 10 May 2006 RWER approval. The list below specifies the groundwater monitoring network when this Order is adopted; changes to the specified monitoring network can be made through Executive Officer approved RWERs. The locations of the wells are shown in Attachments D.1, D.2, and D.3.

Mossdale Landing Wells

Well Name	Date Drilled	Use [1]
MWM-1	5/16/05	WL, A
MWM-2	5/16/05	WL, A
MWM-3	7/1/05	WL, A
MWM-4	5/16/05	WL, A
MWM-5	5/17/05	WL, A
MWM-9	5/19/05	WL, A
MWM-10	2001	WL, A
MWM-11	5/18/05	WL, A
MWM-12	6/20/05	WL, A
MWM-13	5/20/05	WL, A
MWM-14	5/17/05	WL, A
MWM-15	5/16/05	WL, A
MWM-16	5/17/05	WL, A
MWM-17	5/16/05	WL, A
MWM-19	5/18/05	WL, A
MWM-20	5/18/05	WL, A
MWM-21	5/18/05	WL, A
MWM-22	2001	WL, A
MWM-23	7/1/05	WL, A
MWM-24	5/16/05	WL, A
MWM-25	5/19/05	WL, A
MWM-26	5/18/05	WL, A

MBR Facility Wells

Well Name	Date Drilled	Use
KMW-4	1/2/01	WL, A
MBRMW-1	5/18/05	WL, A
MBRMW-2	5/18/05	WL, A
MBRMW-3	5/17/05	WL, A
MBRMW-4	NA	WL, A

River Islands Wells

Well Name	Date Drilled	Use [1]
MWR-1	1999	WL
MWR-2	1999	WL
MWR-3	1999	WL, A
MWR-4	1999	WL
MWR-5	1999	WL
MWR-6	1999	WL
MWR-7	1999	WL
MWR-8	1999	WL
MWR-9	1999	WL
MWR-10	1999	WL
MWR-11	1999	WL, A
MWR-12	1999	WL, A
MWR-13	Pre-1999	WL
MWR-14	Pre-1999	WL
MWR-15	Pre-1999	WL
MWR-16	Pre-1999	WL
MWR-17	Pre-1999	WL
MWR-18	Pre-1999	WL
MWR-19	Pre-1999	WL
MWR-20	Pre-1999	WL
MWR-21	Pre-1999	WL
MWR-22	Pre-1999	WL
MWR-23	8/15/05	WL, A
MWR-24	8/15/05	WL, A
MWR-25	8/15/05	WL, A
MWR-26	8/15/05	WL, A
MWR-27	8/16/05	WL, A
MWR-28	8/16/05	WL, A
MWR-29	8/16/05	WL, A
MWR-30	8/17/05	WL, A
MWR-31	8/17/05	WL, A
MWR-32	8/17/05	WL, A

Reiter Property Pond

Well Name	Date Drilled	Use
RMW-1		WL

Mossdale Landing Wells			River Islands Wells		
Well Name	Date Drilled	Use [1]	Well Name	Date Drilled	Use [1]
			RMW-2		WL
			RMW-3		WL
			RMW-4		WL, A
			RWM-5		WL, A

[1] WL denotes water level monitoring required. A denotes sampling for chemical analysis required. NA denotes not available.

63. To characterize groundwater quality prior to selecting existing land application areas, developers and the Discharger sampled groundwater monitoring wells. That data is described in WDRs Order No. R5-2005-0045. Because no new land application areas are included with this WDRs revision, the data is not presented here. The Discharger is continuing to sample groundwater monitoring wells and is submitting quarterly groundwater monitoring reports. Prior to any authorization to add new land application areas, the Discharger must present further groundwater analysis in future RWER submittals.

64. To further characterize groundwater quality, the Discharger performed 40 direct push boreholes to collect soil and groundwater samples. The locations of the direct push sample locations are described in WDRs Order No. R5-2005-0045. The direct push boreholes samples were collected between 15 and 17 November 2004, and were typically collected from a depth of 13 to 20 feet bgs. The direct push groundwater sample data is available in the previous Order for use in preparing RWER submittals.

65. Depth to groundwater varies depending on location, season, and local influences such as irrigation practices, groundwater extraction, and the presence and stage of surface water bodies. The area of development covered by this Order can be divided into three subareas: River Islands, Mossdale , and the Reiter land application area. River Islands is bounded to the north and west by Old River, to the east by the San Joaquin River, and to the south by Paradise Cut. The Mossdale area is bounded to the west by the San Joaquin River. The Reiter land application area is located approximately two miles east of Mossdale and is less influenced by surface water bodies; however, an unlined irrigation canal exists approximately 500 feet to the east.

66. Groundwater conditions at the River Islands area can be summarized as follows:

    a. Groundwater is typically observed within 12 feet of the ground surface and varies seasonally, rising to within two-feet of the ground surface during late spring/summer, and declining to a depth of 8 to 12 feet during fall/winter/early spring. The groundwater flows from the north to the southwest (from the San Joaquin River to Paradise Cut).

    b. Groundwater quality generally exceeds the applicable TDS Water Quality Limit[1] across the Island. Water quality is best in the northeast (approximately 900 mg/L TDS) and degrades

[1] Water Quality Limit to apply narrative water quality objective specified in the Basin Plan for the protection of the beneficial use of groundwater.

towards the southwest (approximately 1,450 mg/L). Nitrogen compounds in most groundwater samples were below the detection limit. Attachment E.1, which is attached hereto and made part of this Order by reference, presents the approximate extent of groundwater with a TDS concentration of 1,000 mg/L or greater.

67. Groundwater conditions at the Mossdale area can be summarized as follows:

    a. Groundwater is typically observed within 5-10 feet of the ground surface and varies seasonally, rising to less than 5-feet of the ground surface. Groundwater elevation is influenced by the nearby river stage and also dewatering activities. Dewatering is performed for construction activities and is also occurring as a result of the broken stormwater pipe located east of the Mossdale area. In the northern portion of Mossdale, groundwater flows to the southwest, toward the San Joaquin River. Groundwater flow direction in the southern portion of Mossdale is controlled by dewatering activities.

    b. Groundwater quality generally exceeds the applicable TDS water quality limit[1]. The better quality groundwater is located in the southern portion of the Mossdale area and may be the result of dilution caused by dewatering. Water quality is worst in the northeast (approximately 2,000 mg/L TDS) and improves towards the southwest (approximately 1,000 mg/L). Nitrogen compounds in most groundwater samples were variable with most sample concentrations below 10 mg/L as nitrogen but some concentrations were above 17 mg/L. Attachment E.2, which is attached hereto and made part of this Order by reference, presents the approximate extent of groundwater with a TDS concentration of 1,000 mg/L or greater.

68. Groundwater conditions at the Reiter area can be summarized as follows:

    a. Groundwater is typically observed 15 to 20 feet below the ground surface. The groundwater flows to the west towards the San Joaquin River. A South San Joaquin Irrigation District unlined canal exists approximately 500 feet east of the land application area.

    b. Groundwater quality exceeds the applicable TDS water quality limit[1] across a portion of the property. Water quality is best in the east (approximately 500 mg/L TDS) and degrades towards the west (approximately 900 to 1,400 mg/L). Nitrogen compounds vary from approximately 5 to 12 mg/L and concentration trends increase from east to west. A portion of the Reiter area has a TDS groundwater concentration above 1,000 mg/L.

69. The RWD states that, though variable, there is a general pattern of shallow groundwater flowing away from the San Joaquin River. However, shallow groundwater may flow in any direction as a result of localized groundwater extraction or recharge. Depth to groundwater can be just a few feet below ground surface in some areas, especially near surface water bodies.

70. The existing groundwater monitoring network will not be adequate to evaluate groundwater quality at all future recycled water storage pond sites and land application areas. Therefore, it is appropriate that the Discharger install additional groundwater monitoring wells, continue

groundwater monitoring, and complete a technical analysis of groundwater monitoring data to determine final background concentrations.

71. The monitoring network is adequate to allow evaluation of groundwater quality at the existing recycled water storage pond sites (described in Finding No. 29) and land application areas (described in Finding No. 32) justifying an initial capacity of 0.75 MGD. The Discharger is required to continue groundwater monitoring at these sites and areas, and to complete a technical analysis of these groundwater monitoring data to determine final background concentrations.

72. Figure 6-8 of the RWD indicates that applied recycled water (with a concentration of approximately 525 mg/L) that percolates below the root zone is anticipated to reach a TDS concentration of 1,514 mg/L due to evapoconcentration and predicts a reduction of the TDS concentration due to soil and chemical reactions in the subsurface to approximately 969 mg/L through mineral precipitation, ion exchange, and other attenuation processes. To protect groundwater quality, the Discharger is limiting application of recycled water to lands where shallow groundwater TDS average concentrations exceed 1,000 mg/L.

73. The RWD presents a discussion of nitrogen compounds contained in applied recycled water, and estimates that the 30-day average total nitrogen concentration of recycled water will not exceed 10 mg/L. Approximately 85 to 90 percent of the applied nitrogen is expected to be taken up by crops. Denitrification and/or conversion to relatively stable organic nitrogen compounds is also anticipated to occur. Although not described in the RWD, nitrogen compound concentration reduction may also occur in the recycled water storage ponds, further reducing the amount of applied nitrogen.

Antidegradation Analysis

74. State Water Board Resolution No. 68-16 (hereafter Resolution No. 68-16 "Statement of Policy with Respect to Maintaining High Quality of Waters of California" (hereafter Resolution 68-16 or the "Antidegradation Policy") requires the Regional Water Board in regulating the discharge of waste to maintain high quality waters of the State (i.e., background water quality) until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Water Board's policies (e.g., quality that exceeds water quality objectives). Resolution 68-16 requires that any discharge to the existing high quality water be required to meet waste discharge requirements which will result in the Best Practicable Treatment or Control (BPTC) of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the state will be maintained.

75. This Order does not allow degradation of groundwater beneath the land application areas. This Order requires, among other requirements, the Discharger to comply with Title 22 standards for tertiary treatment, limits application of recycled water to land application areas where the groundwater exceeds 1,000 mg/L, and contains effluent limits that prevent degradation of

groundwater. This Order may result in some degradation of groundwater beneath the storage and treatment ponds. The Regional Water Board finds that some degradation of groundwater by some of the typical waste constituents released with discharge from a municipal wastewater utility after effective source control, treatment, and control is consistent with maximum benefit to the people of California. The technology, energy, water recycling, and waste management advantages of municipal utility service far exceed any benefits derived from a community otherwise reliant on numerous concentrated individual wastewater systems, and the impact on water quality will be substantially less. Degradation of groundwater by constituents (e.g., toxic chemicals) other than those specified in the Groundwater Limitations of this Order, and by constituents that can be effectively removed by conventional treatment (e.g., total coliform bacteria) is prohibited. When allowed, the degree of degradation permitted depends upon many factors (i.e., background water quality, the waste constituent, the beneficial uses and most stringent water quality objective, source control measures, and/or waste constituent treatability). This Order includes effluent limits and other requirements that will result in the use of BPTC.

76. The Regional Water Board further finds that some degradation of groundwater beneath the treatment and storage ponds is consistent with maximum benefit to the people of the state provided that:

    a. The degradation is confined within a specified boundary;

    b. The Discharger minimizes the degradation by fully implementing, regularly maintaining, and optimally operating Best Practicable Treatment and Control (BPTC) measures;

    c. The degradation is limited to waste constituents typically encountered in municipal wastewater as specified in the Groundwater Limitations of this Order; and

    d. The degradation does not result in water quality less than that prescribed in the Basin Plan.

Treatment and Control Practices

77. Resolution 68-16 requires the discharge to be regulated to assure use of best practicable treatment or control (BPTC). The Regional Water Board may not, in general, specify the manner of compliance; therefore, to implement Resolution 68-16, the Regional Board sets forth effluent and receiving water limitations and other requirements in the Order. To be consistent with Resolution 68-16, the Discharger must assure that it is complying with the requirements of this Order and complying with the effluent and receiving water limits. The Discharger will provide treatment and control of the discharge that incorporates:

    a. Use of a low salinity, low hardness water supply to the extent possible;

    b. Conversion from chlorine disinfection to UV disinfection to reduce disinfection byproducts and minimize salinity increases caused by the treatment process.

    c. Metal, concrete and/or plastic treatment structures that provide complete containment during wastewater treatment;

    d. Alarm and automatic flow diversion systems to prevent system bypass or overflow;

    e. Effluent storage pond liner systems consisting of at least 40-mil high density polyethylene;

f. Disinfection of treated effluent;
g. Recycled water and nitrogen application at agronomic rates;
h. Appropriate biosolids storage and disposal practices;
i. An Operation and Maintenance (O&M) manual; and
j. Certified operators to assure proper operation and maintenance.

78. The WRP design and effluent recycling program incorporate numerous BPTC measures. In order to determine compliance with Resolution No. 68-16, it is appropriate to require installation and sampling of additional groundwater monitoring wells and to formally determine background groundwater concentrations for selected constituents at proposed land application areas prior to application and to continue monitoring wells at existing land application areas. Groundwater monitoring presently characterizes groundwater conditions at selected recycled water land application areas and all recycled water storage pond sites located across a large region. The Discharger has voluntarily limited recycled water application to areas with shallow groundwater TDS average concentrations above 1,000 mg/L and this Order specifies that the application of recycled water may only occur in areas where the TDS concentrations are above 1,000 mg/L. This Order requires additional groundwater monitoring wells to be installed to continue the groundwater characterization at proposed land application areas and recycled water storage sites. If groundwater is degraded by the discharge or there is evidence that the discharge may cause degradation, then the Discharger will be required to evaluate and implement additional BPTC measures for each conveyance, treatment, storage, and disposal component of the system. Completion of these tasks will ensure that BPTC and the highest water quality consistent with the maximum benefit to the people of the State will be achieved.

79. This Order establishes interim groundwater limitations for the WRP that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan. This Order contains tasks for assuring that BPTC and the highest water quality consistent with the maximum benefit to the people of the State will be achieved. Accordingly, the discharge is consistent with the antidegradation provisions of Resolution No. 68-16. Based on the results of the scheduled tasks, the Regional Water Board may reopen this Order to reconsider groundwater limitations and other requirements to comply with Resolution No. 68-16.

Basin Plan, Beneficial Uses, and Regulatory Considerations

80. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates

by reference plans and policies adopted by the State Water Board. These requirements implement the Basin Plan.

81. The beneficial uses of the San Joaquin River (within the Sacramento San Joaquin Delta Hydrologic Area) are municipal and domestic supply; agricultural supply; industrial process supply; industrial service supply; water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; wildlife habitat; and navigation.

82. The Basin Plan designates the beneficial uses of underlying groundwaters as municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.

83. The Basin Plan encourages water recycling.

84. The Basin Plan establishes numerical and narrative water quality objectives for surface water and groundwater within the basin. Numerical and narrative water quality objectives are maximum limits directly applicable to the protection of designated beneficial uses of the water unless higher levels are the result of factors that cannot be reasonably controlled or are not subject to the authority of the State and Regional Water Boards. The Basin Plan requires that the Regional Water Board, on a case-by-case basis, follow specified procedures to determine numerical limitations that apply the narrative objectives when it adopts waste discharge requirements.

85. The Basin Plan specifies a numerical water quality objective for ground waters for Bacteria that states, in part, the following:

> *"The following objectives apply to all ground waters of the Sacramento and San Joaquin River Basins, as the objectives are relevant to the protection of designated beneficial uses."*
>
> ***"Bacteria***
> *In ground waters used for domestic or municipal supply (MUN), the most probable number of coliform organisms over any seven-day period shall be less than 2.2/100mL."*

Groundwater, as described in the Basin Plan (page I-1.00), includes all subsurface waters that occur in fully saturated zones and fractures within soils and other geologic formations.

86. The Regional Water Board applies the Bacteria objective to all groundwaters designated as municipal or domestic supply (MUN), not just those waters currently used for MUN. This interpretation is consistent with the California Water Code (CWC) and the Basin Plan. The Regional Water Board has consistently interpreted the objective to apply to groundwater designated for MUN. The Regional Water Board has a long-standing pattern and practice of adopting WDRs that reflect this interpretation. The following excerpts from the Basin Plan clearly support the plain meaning of the Basin Plan as well as the Regional Water Board's established pattern and practice:

a. The introductory paragraph on Water Quality Objectives for Ground Waters (page III-9.00 of the Basin Plan) states: *"The following objectives apply to all ground waters of the Sacramento and San Joaquin River Basins, as the objectives are relevant to the protection of designated beneficial uses."*

b. The Policy for Application of Water Quality Objectives (page IV-16.00) states: *"Water quality objectives apply to all waters within a surface water or ground water resource for which beneficial uses have been designated, rather than at intake, wellhead, or other point of consumption."* Consistent with the CWC and the Basin Plan, the Regional Water Board applies the Bacteria objective to all groundwaters designated as municipal or domestic supply (MUN), not just those waters currently used for MUN.

c. State Water Board Resolution No. 88-63 (Adoption of Policy Entitled "Sources of Drinking Water") defines all groundwaters of the State to be suitable or potentially suitable for MUN uses, and states that they should be designated as MUN in Basin Plans unless at least one the following three criteria are satisfied:

- The total dissolved solids concentration of the resource exceeds 3,000 mg/L (5,000 µmhos/cm, electrical conductivity) and it is not reasonably expected by the Regional Water Board to supply a public water system, or
- There is contamination, either by natural processes or human activity (unrelated to a specific pollution incident), that cannot reasonably be treated for domestic use using either Best Management Practices or best economically achievable treatment practices, or
- The water source does not provide sufficient water to supply a single well capable of producing an average sustained yield of 200 gallons per day.

Accordingly, the Regional Water Board designated all groundwaters of the basins as suitable or potentially suitable for MUN in the Basin Plan (pages II-2.00 and -3.00). The Regional Water Board can only "de-designate" beneficial uses of a particular water resource through amendment of the Basin Plan.

87. State Water Board Order No. WQO-2003-0014 upheld the Regional Water Board's interpretation of the Basin Plan with respect to implementation of the Bacteria objective, stating: *"The Basin Plan contains a water quality objective for bacteria that applies to groundwater that states: 'In groundwaters used for domestic or municipal supply (MUN) the most probable number of coliform organisms over any seven-day period shall be less than 2.2/100 mL.' Since the groundwater is designated for municipal or domestic supply, a groundwater limitation for coliform of less than 2.2MPN/100 mL is appropriate."*

88. The Basin Plan includes a water quality objective for Chemical Constituents that, at a minimum, requires waters designated as domestic or municipal supply to meet the maximum contaminant levels (MCLs) specified in the following provisions of Title 22, California Code of Regulations: Tables 64431-A (Inorganic Chemicals) and 64431-B (Fluoride) of Section 64431, Table 64444-

A (Organic Chemicals) of Section 64444, Table 64449-A (Secondary Maximum Contaminant Levels-Consumer Acceptance Limits) of Section 64449, and 64449-B (Secondary Maximum Contaminant Levels-Ranges) of Section 64449. The Basin Plan's incorporation of these provisions by reference is prospective, and includes future changes to the incorporated provisions as the changes take effect. The Basin Plan recognizes that the Regional Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

89. The Basin Plan contains narrative water quality objectives for Chemical Constituents, Tastes and Odors, and Toxicity. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. The Chemical Constituents objective requires that groundwater "shall not contain chemical constituents in concentrations that adversely affect beneficial uses." The Tastes and Odors objective requires that groundwater "shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses." Chapter IV, Implementation, of the Basin Plan contains the "Policy for Application of Water Quality Objectives." This Policy specifies, in part, that compliance with narrative water quality objectives may be evaluated considering numerical criteria and guidelines developed and/or published by other agencies and organizations.

Water Recycling

90. State Water Board Resolution No. 77-1, *Policy with Respect to Water Recycling in California*, encourages recycling projects that replace or supplement the use of fresh water, and *The Water Recycling Law* (CWC sections 13500-13529.4) declares that utilization of recycled water is of primary interest to the people of the State in meeting future water needs.

91. The California Department of Health Services (DHS) has established statewide water recycling criteria in Title 22, CCR, Section 60301 et. seq. (hereafter Title 22). The Discharger will treat the wastewater to tertiary standards and disinfect the effluent per Title 22 requirements.

92. A 1988 Memorandum of Understanding between DHS and the State Water Board on the use of recycled water establishes basic principles relative to the two agencies and the Regional Water Boards. The Memorandum allocates primary areas of responsibility and authority between the agencies and provides for methods and mechanisms necessary to assure ongoing, continuous future coordination of activities relative to use of recycled water.

93. DHS requires that the American Water Works Association (AWWA) Guidelines for Distribution of Non-Potable Water and Guidelines for the On-site Retrofit of Facilities Using Disinfected Tertiary Recycled Water be implemented in design and construction of recycling equipment. The guidelines require installation of purple pipe, adequate signs, and adequate separation between the recycled water lines and domestic water lines and sewer lines. The Discharger proposes to fully comply with these requirements with the exception of the pipe installation

addressed in the 9 February 2005 DHS letter titled, *Recycled Water Main & Sanitary Sewer Force Main Separation Requirements,* and as approved by DHS.

94. Section 60323(a) of Title 22 states that no person shall produce or supply recycled water for direct reuse from a proposed water recycling plant unless an engineering report is submitted for review and approval by DHS and the Regional Water Board. Irrigation of fodder crops, as well as irrigation of turf grass, trees, and shrubs at parks, medians, and schools, is considered a beneficial reuse. The Discharger submitted an Engineering Report to DHS in February 2006. DHS provided comments on the revised Engineering Report on 28 April 2006, and those comments are addressed in this Order.

95. CWC Section 13523.1 states that in lieu of issuing waste discharge requirements pursuant to Section 13263 or water reclamation requirements pursuant to Section 13253 for a user of recycled water, a regional board may issue a master reclamation permit to a supplier or distributor, or both, of recycled water.

96. CWC Section 13263 (h) states that the regional board may incorporate the requirements prescribed pursuant to this Section into a master recycling permit for either a supplier or distributor, or both, of recycled water.

97. CWC Section 13260 (m) states that except upon the written request of the regional board, a report of waste discharge need not be filed pursuant to subdivision (a) or (c) by a user of recycled water that is being supplied by a supplier or distributor of recycled water for whom a master recycling permit has been issued pursuant to Section 13523.1.

98. CWC Section 13523.1 (b) requires a Master Reclamation Permit to include all of the following:

    a. Waste discharge requirements, adopted pursuant to Article 4 (commencing with Section 13260) of Chapter 4.

    b. A requirement that the permittee comply with the uniform statewide reclamation criteria established pursuant to Section 13521 (Title 22). Permit conditions for a use of reclaimed water not addressed by the uniform statewide water reclamation criteria shall be considered on a case-by-case basis.

    c. A requirement that the permittee establish and enforce rules or regulations for reclaimed water users, governing the design and construction of reclaimed water use facilities and the use of reclaimed water, in accordance with the uniform statewide reclamation criteria established pursuant to Section 13521.

    d. A requirement that the permittee submit a quarterly report summarizing reclaimed water use, including the total amount of reclaimed water supplied, the total number of reclaimed water use sites, and the locations of those sites, including the names of the hydrologic areas underlying the reclaimed water use sites.

e. A requirement that the permittee conduct periodic inspections of the facilities of the reclaimed water users to monitor compliance by the users with the uniform statewide reclamation criteria established pursuant to Section 13521 and the requirements of the master reclamation permit.

f. Any other requirements determined to be appropriate by the regional board.

These WDRs and Master Reclamation Permit implement CWC Section 13523.1(b).

Other Regulatory Considerations

99. On 2 May 2006, the State Water Board adopted Statewide General Waste Discharge Requirements For Sanitary Sewer Systems General Order No. 2006-0003-DWQ (General Order). The General Order requires all entities that own or operate sanitary sewer systems greater than one mile in length to comply with the Order. The Discharger's collection system exceeds one mile therefore the General Order is applicable.

100. The United States Environmental Protection Agency (USEPA) has promulgated biosolids reuse regulations in 40 CFR 503, *Standard for the Use or Disposal of Sewage Sludge,* which establishes management criteria for protection of ground and surface waters, sets application rates for heavy metals, and establishes stabilization and disinfection criteria.

101. The Regional Water Board is using the Standards in 40 CFR 503 as guidelines in establishing this Order, but the Regional Water Board is not the implementing agency for 40 CFR 503 regulations. The Discharger may have separate and/or additional compliance, reporting, and permitting responsibilities to the USEPA. The RWD states that all biosolids will be hauled to a separate permitted facility.

102. The State Water Board adopted Order No. 97-03-DWQ (General Permit No. CAS000001) specifying waste discharge requirements for discharges of stormwater associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers.

103. The City of Lathrop is the lead agency for purposes of the CEQA. The City has prepared a number of Environmental Impact Reports (EIRs) and addenda to EIRs for this projectthat have been adopted in accordance with the CEQA. The Regional Water Board has considered the CEQA documents and has included requirements in this Order, including monitoring and reporting requirements to protect water quality and prevent nuisance. The proposed wastewater treatment and disposal system is consistent with the project as analyzed in the EIRs. The EIRs identify significant environmental effects and mitigation measures as discussed in the following findings. This Order incorporates requirements and monitoring of mitigation measures that are within the authority of the Regional Water Board. The CEQA documents and Notice of Determination date are presented in the table:

Title	Notice of Determination	City Council Resolution(s)	Mitigation Monitoring Prog	Mitigated Negative Dec	Mitigation Measures
Final EIR, Mossdale Landing Urban Design Concept	1/28/03	03-1380	N/A	N/A	See Finding 104 a
Final Subsequent EIR, River Islands at Lathrop Project	1/29/03	03-1383, 03-1384, 03-1385, 03-1386, 03-1387	Yes	N/A	See Finding 104 b
Final Supplemental EIR, Mossdale Landing East	3/3/04	04-1618	Yes	N/A	See Finding 104 c
Final EIR, Lathrop Water Recycling Plant No. 1, Phase 1 Expansion	3/14/04	03-1407	Yes	N/A	See Finding 104 d
Reiter Property Recycled Water Disposal Field Relocation	6/23/04	04-1698	N/A	Yes	See Finding 104 e
Final EIR, Lathrop Water, Wastewater, and Recycled Water Master Plan	7/11/04	01-1104, 01-1105	Yes	N/A	See Finding 104 f
Final EIR, Central Lathrop Specific Plan	11/10/04	04-1777	Yes	N/A	See Finding 104 g
Final EIR, Mossdale Landing South	9/23/04	04-1749, 04-1750, 04-1752	Yes	N/A	See Finding 104 h

Title	Notice of Determination	City Council Resolution(s)	Mitigation Monitoring Prog	Mitigated Negative Dec	Mitigation Measures
Addendum to the EIR for the Lathrop Water Recycling Plant No. 1, Phase 1 Expansion Project	11/6/04	04-1781	Yes		See Finding 104 i
Addendum to the EIR for the Lathrop Water Recycling Plant No. 1, Phase 1 Expansion Project, Expansion of Mossdale Landing Recycled Water Disposal Fields	11/16/04	04-1781	N/A	N/A	See Finding 104 j
Nurisso Recycled Water Storage Ponds	Resolution 11/30/04	04-1788	N/A	N/A	See Finding 104 k
Addendum to the EIR Lathrop Water, Wastewater, and Recycled Water Master Plan for the Five-Year Wastewater Capacity Project	1/4/06	05-2017	Yes	N/A	See Finding 104 l
Final EIR, West Lathrop Specific Plan	2/21/96	96-494	Yes	N/A	See Finding 104 m
Initial Study, River Islands Disposal Fields Expansion	N/A	Staff Level Approved	N/A	N/A	See Finding 104 n

Title	Notice of Determination	City Council Resolution(s)	Mitigation Monitoring Prog	Mitigated Negative Dec	Mitigation Measures
Addendum to the EIR, Lathrop Water, Wastewater and Recycled Water Master Plan for the Frewert Road Recycled Water Storage Ponds	5/17/06	06-2134			See Finding 104 o

104. Each of the CEQA documents listed above identified mitigation measures that were required as part of project implementation. Each of the documents is discussed below.

a. The *Final EIR, Mossdale Landing Urban Design Concept* described the following mitigation measures:

i. Interim and build out development shall not occur until both adequate wastewater treatment capacity and tertiary treatment to Title 22 standards for unrestricted use is available.

ii. Build out shall not commence until and unless additional disposal capacity is provided to dispose of the increase in recycled water. Further conditions include:

1 Additional storage and application areas are available for land application of recycled water.

2 Infrastructure to transmit the recycled water exists.

3 Storage ponds are lined.

4 Application occurs at agronomic rates.

5 The application system is operational.

See A. Discharge Prohibitions; B. Discharge Specifications 1, 2, 3, 4, 6, 9, 14, 21; E. Water Recycling Specifications 8;

b. The *Final Subsequent EIR, River Islands at Lathrop Project* described the following mitigation measures:

i. Demand for wastewater treatment capacity during Phase 1a and Phase 1 will be mitigated by the City of Lathrop issuing occupancy certificates after wastewater treatment capacity is available.

ii. Demand for wastewater treatment capacity during Phase II will be mitigated by the City of Lathrop issuing occupancy certificates after wastewater treatment capacity is available.

iii. Demand for recycled water storage and disposal capacity for Phase II will be mitigated by the City of Lathrop limiting occupancy until adequate storage and disposal capacity is available.

c. The *Final Supplemental EIR, Mossdale Landing East* described the following mitigation measures:

i. Demand for wastewater treatment capacity shall not exceed 125,000 gpd. If project demands exceed the allotment, additional capacity must be acquired before additional construction can occur. The City of Lathrop is identified as responsible for monitoring flow rates.

ii. Funding for the MBR treatment facility shall be mitigated by the owners, developers, etc., to reimburse sewer consortium properties for their share of the wastewater costs.

iii. Demand for the wastewater collection system shall be mitigated by constructing sufficient collection system infrastructure prior to occupancy of homes.

iv. Funding for the collection system construction shall be mitigated by the owners, developers, etc., in accordance with established fee programs.

v. Proposed water recycling facilities shall be mitigated by review and approval of land areas by the City of Lathrop and Regional Water Quality Control Board.

See E. Water Recycling Specifications.

d. The *Final EIR, Lathrop Water Recycling Plant No. 1, Phase 1 Expansion* described the following mitigation measures:

i. Long term odor impacts will be mitigated by engineering controls.

ii. Potential for violation of standards designed to protect public health will be mitigated by ensuring appropriate techniques and equipment are used in the design and construction, develop guidelines for the use of recycled water, provide training to operators, and enforce guidelines adherence through a City ordinance.

See A. Discharge Prohibition 5; B. Discharge Specifications 5, 6, 8, 10, 12, 13, 14, 15, 16, 19; E. Water Recycling Specifications; G. Provisions

e. The *Reiter Property Recycled Water Disposal Field Relocation* is a mitigated negative declaration that was prepared as an amendment to the *Final EIR, Lathrop Water Recycling Plant No. 1 Phase 1 Expansion*. The report addressed use of a new land application area and pipeline. The *Initial Study* stated all mitigation measures required had been evaluated and addressed in the *Lathrop Water Recycling Plant No. 1 Phase 1 Expansion Environmental Impact Report*. A 6 July 2004 City of Lathrop Council Resolution No. 04-1698, reaffirmed mitigation measures described in the *Lathrop Water Recycling Plant No. 1, Phase 1 Expansion*.

f. The *Final EIR, Lathrop Water, Wastewater, and Recycled Water Master Plan* described the following mitigation measures:

   i. TDS Groundwater quality impacts was identified as an issue that would be mitigated through on-going water quality monitoring of the City's municipal supply wells. If treatment is required possible measures will include:

      1 Development of well-head treatment facilities.

      2 Blending of groundwater with surface water.

      3 Relocation of wells further east away from the salinity intrusion front.

   ii. Long term odor impacts will be mitigated by engineering controls.

   See A. Discharge Prohibitions; B. Discharge Specifications 9, 10, 11, 13, 14, 17, 20, 21; C. Effluent Limitations.

g. The Final EIR, Central Lathrop Specific Plan described the following mitigation measures.

   i. The potential for increases in odorous emissions from the wastewater treatment facility or recycled water storage ponds shall be controlled by engineering controls.

   ii. Demand for wastewater treatment shall be controlled by not allowing occupying buildings until adequate treatment capacity and conveyance infrastructure are in place to serve that portion of the project site.

   See A. Discharge Prohibitions; B. Discharge Specifications.

h. The *Final EIR, Mossdale Landing South* described the following mitigation measures:

   i. Demand for wastewater treatment capacity shall not exceed their allocated wastewater treatment capacity. Additional capacity must be acquired before additional development is allowed. If project demands exceed the allotment, additional capacity must be acquired before additional construction can occur. The City of Lathrop is identified as responsible for monitoring flow rates.

   ii. Funding for the MBR treatment facility shall be mitigated by the owners, developers, etc., to reimburse sewer consortium properties for their share of the wastewater costs.

   iii. Demand for the wastewater collection system shall be mitigated by constructing sufficient collection system infrastructure prior to occupancy of homes.

   iv. Funding for the collection system construction shall be mitigated by the owners, developers, etc., in accordance with established fee programs.

   v. Proposed water recycling facilities shall be mitigated by review and approval of land areas by the City of Lathrop and Regional Water Quality Control Board.

   See E. Water Recycling Specifications.

i. The *Addendum to the Environmental Impact Report for the Lathrop Water Recycling Plant No. 1, Phase I Expansion Project* (Valentine property) described no new mitigation measures. The City of Lathrop Council Resolution No. 04-1781 reaffirmed mitigation measures described in the *Final EIR, Lathrop Water Recycling Plant No. 1, Phase 1 Expansion, Final EIR, Mossdale Landing Urban Design Concept, and Final EIR, Mossdale Landing South*

j. The *Addendum to the EIR for the Lathrop Water Recycling Plant No. 1, Phase 1 Expansion Project, Expansion of Mossdale Landing Recycled Water Disposal Fields* described no new mitigation measures. The City of Lathrop Council Resolution 04-1781 reaffirmed and readopted the mitigation measures published in *Final EIR, Lathrop Water Recycling Plant No. 1, Phase 1 Expansion.*

k. The *Nurisso Recycled Water Storage Ponds* described no new mitigation measures. The City of Lathrop Council Resolution No. 04-1788 reaffirmed mitigation measures described in the *Final EIR, Lathrop Water Recycling Plant No. 1, Phase 1 Expansion, Final EIR, Mossdale Landing Urban Design Concept, and Final EIR, Mossdale Landing South*.

l. The *Addendum to the City of Lathrop Water, Wastewater, and Recycled Water Master Plan Environmental Impact Report* describes changes to the wastewater plan previously described in the 2001 Master Plan. The following mitigation measures regarding wastewater issues are identified:

    i. Potential for violation of standards designed to protect public health can be minimized by employing appropriate techniques and equipment, develop a program of guidelines, provide education to developers and employees, and enforce the guidelines through a City ordinance.

    ii. Vector production shall be controlled by consulting with the San Joaquin County Mosquito and Vector Control District and incorporate features to minimize conditions favorable to mosquito breeding.

    iii. Jurisdictional Waters of the United States will be addressed through determination of land as jurisdictional or not, Section 404 permitting as needed, replacement or rehabilitation of jurisdictional waters on a no-net loss basis, and erosion control.

m. The *Final EIR, West Lathrop Specific Plan Environmental Impact Report* described the following mitigation measures for wastewater management, odor control, and availability of land areas for recycled water application:

    i. Select the most environmentally superior alternative for long term waste treatment, which might include discharge of wastewater to the City of Manteca or Stockton wastewater system.

    ii. Eliminate on-site impacts at treatment plant, provide storage ponds in case of plant upset, and provide odor control in design of treatment facilities.

    iii. Provide land disposal of effluent for interim and long term needs, meet State standards for effluent spraying under Title 22, dispose of sludge on a regular basis.

See B. Discharge Specifications 6, 10, 15.

n. The *River Islands Disposal Fields Expansion* report states no new potential impacts were identified and that the mitigation measures that will be employed for the *Final EIR, Lathrop Water Recycling Plant No. 1, Phase 1 Expansion* will address any wastewater issue arising from the disposal fields expansion.

o. The Addendum to the EIR for the Lathrop Water, Wastewater, and Recycled Water Master Plan for the Frewert Road Recycled Water Storage Pond described no new mitigation measures. The City of Lathrop Council Resolution 06-2134 reaffirmed mitigation measures described in the Final EIR, Lathrop Water Recycling Plant No. 1, Phase 1 Expansion and Final EIR, Central Lathrop Specific Plan.

This Order requires all significant wastewater related issues identified in CEQA documents at the time of adoption of this Order, to be mitigated as part of any wastewater system expansion.

105. Section 13267(b) of the CWC provides that: "In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of discharging, or who proposes to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."

The monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program No. R5-2006-____ is necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.

106. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981). These standards, and any more stringent standards adopted by the State or County pursuant to CWC Section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order. Those wells that do not have a construction log, boring log, or County permit may not be used for monitoring associated with this Order without documentation of the well construction and retroactive permitting through the San Joaquin County Environmental Health Department.

107. State regulations that prescribe procedures for detecting and characterizing the impact of waste constituents from waste management units on groundwater are found in Title 27. While the WRP is exempt from Title 27, the data analysis methods of Title 27 may be appropriate for

determining whether the discharge complies with the terms for protection of groundwater specified in this Order.

108. The discharge authorized herein and the treatment and storage facilities associated with the discharge, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), Section 20380 et seq. (hereafter Title 27). The exemption, pursuant to Title 27 CCR Section 20090(a), is based on the following:

    a. The waste consists primarily of domestic sewage and treated effluent;

    b. The waste discharge requirements are consistent with water quality objectives; and

    c. The treatment and storage facilities described herein are associated with a municipal wastewater treatment plant.

109. Pursuant to CWC Section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

Public Notice

110. The recommendations of the State Department of Health Services regarding the public health aspects of water recycling have been considered in preparation of this Order.

111. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.

112. The Discharger and interested agencies and persons have been notified of the Regional Water Board's intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

113. All comments pertaining to the discharge were heard and considered in a public meeting.

IT IS HEREBY ORDERED that Order No. R5-2005-0045 is rescinded, and that pursuant to Sections 13263 and 13267 of the California Water Code, the City of Lathrop its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted hereunder, shall comply with the following:

[Note: Other prohibitions, conditions, definitions, and some methods of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991.]

A. Discharge Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.

2. Bypass or overflow of untreated or partially treated waste is prohibited.

3. Discharge of sewage from a sanitary sewer system at any point upstream of a wastewater treatment plant is prohibited. Discharge of recycled water downstream of the wastewater treatment plant other than to the emergency storage pond, recycled water storage ponds, or land application areas authorized under this Order is prohibited.

4. Discharge of waste classified as "hazardous" under Section 2521, Chapter 15 of Title 23 or "designated," as defined in Section 13173 of CWC is prohibited.

5. Application of recycled water in a manner or location other than that described in this Order or subsequent Executive Officer approved Recycled Water Expansion Reports is prohibited.

6. The use of recycled water for purposes other than irrigation as defined in Title 22 Section 60304(a) and this Order is prohibited.

B. Discharge Specifications

1. Upon adoption of this Order, the monthly average flow rate may not exceed 750,000 gpd.

2. The monthly average flow rate may increase to an ultimate flow of 6,240,000 gpd based on completed improvements and submittal of Recycled Water Expansion report(s) described in Provision G.1.k. Each proposed increase in flow rate must be approved in writing by the Executive Officer prior to the increase.

3. Capacity expansion requests must be 0.75 MGD increments or greater.

4. This Order does not authorize the discharge of waste to any land area proposed for use as a recycled water storage pond, wastewater pond, or land application area unless the land area has been reviewed in compliance with CEQA and subject to a final CEQA document adopted prior to the date of adoption of this Order. The Discharger's determination that a new land area is exempt from CEQA does not provide an exception to this Specification.

5. Wastewater treatment and use of recycled water shall not cause pollution or a nuisance as defined by Section 13050 of the CWC.

6. The Discharger shall comply with all of the following pursuant to CWC Section 13523.1(b).

   a. The Discharger shall comply with this Order, adopted pursuant to Article 4 (commencing with Section 13260) of Chapter 4 of Division 7 of the CWC.

b. The Discharger shall comply with the uniform statewide reclamation criteria established pursuant to CWC Section 13521.

c. The Discharger shall establish and enforce rules or regulations for reclaimed water users, governing the design and construction of reclaimed water use facilities and the use of reclaimed water, in accordance with the uniform statewide reclamation criteria established pursuant to CWC Section 13521.

d. The Discharger shall comply with the attached Monitoring and Reporting Program.

e. The Discharger shall conduct periodic inspections of the facilities of the reclaimed water users to monitor compliance by the users with the uniform statewide reclamation criteria established pursuant to CWC Section 13521 and the requirements of this master reclamation permit.

f. The Discharger shall comply with any other requirements determined to be appropriate by the regional board.

7. The incidental discharge of recycled water from land application areas to waters of the State is not a violation of these requirements if the incidental discharge does not unreasonably affect the beneficial uses of the water, and does not result in exceeding an applicable water quality objective in the receiving water. Such discharge is only acceptable if the land application area has an approved irrigation system, safeguards to prevent discharge, monitoring at the frequency in the Monitoring and Reporting Program, and complies with this Order.

8. Public contact with wastewater and recycled water shall be precluded or controlled through such means as fences, signs, or acceptable alternatives.

9. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations.

10. Objectionable odors originating at the facility shall not be perceivable beyond the limits of the property owned by the Discharger.

11. As a means of discerning compliance with Discharge Specification B.10, the dissolved oxygen content in the upper one foot of any wastewater or recycled water storage pond shall not be less than 1.0 mg/L.

12. The Discharger shall operate all systems and equipment to maximize treatment of wastewater and optimize the quality of the discharge.

13. The Discharger shall treat the wastewater such that it complies with Title 22 CCR, Section 60301.230 (“Disinfected Tertiary Recycled Water”).

14. All treatment and storage facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

15. Wastewater and recycled water storage ponds shall be managed to prevent breeding of mosquitoes. In particular:

    a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.

    b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.

    c. Dead algae, vegetation, and debris shall not accumulate on the water surface.

16. The facility shall have sufficient treatment, storage, and disposal capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

17. Freeboard in any pond containing wastewater or recycled water shall never be less than two feet as measured from the water surface to the lowest point of overflow.

18. On or about **15 October** of each year, available recycled water pond storage capacity shall at least equal the volume necessary to comply with Discharge Specifications B.16 and B.17.

19. All recycled water conveyance and distribution piping and equipment shall comply with California Department of Health Services requirements and American Water Works Association (AWWA) *Guidelines for Distribution of Non-Potable Water* and *Guidelines for the On-site Retrofit of Facilities Using Disinfected Tertiary Recycled Water* with the exception of the pipe installation addressed in the 9 February 2005 DHS letter titled, *Recycled Water Main & Sanitary Sewer Force Main Separation Requirements*, and as approved by DHS.

20. The Discharge of wastewater shall be limited to land application areas where shallow groundwater TDS average concentrations exceed 1,000 mg/L unless otherwise authorized by the Executive Officer.

21. All ponds that store raw wastewater, partially treated wastewater, or recycled water shall be lined with at least 40-mil thick high density polyethylene or equivalent.

C. Effluent Limitations

1. Effluent discharged from the disinfection system of each treatment facility (i.e., WRP-1 and WRP-2), shall not exceed the following limits:

Constituent	Units	Monthly Average	Daily Maximum
BOD_5	mg/L	10	20
TSS	mg/L	10	--
Total N	mg/L	10	<20
TDS	mg/L	600	--

BOD_5 denotes 5-day Biochemical Oxygen Demand. TSS denotes Total Suspended Solids. Total N denotes Total Nitrogen. TDS denotes Total Dissolved Solids.

2. Effluent discharged from the disinfection system of each treatment facility, (i.e., WRP-1 and WRP-2), shall comply with the following limits for total coliform organisms:
   a. The median concentration of total coliform bacteria measured in the disinfected effluent shall not exceed an MPN of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed.
   b. The number of total coliform bacteria shall not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30-day period.
   c. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters.

3. The effluent discharged from the disinfection system of each treatment facility, (i.e., WRP-1 and WRP-2), shall not exceed any of the following:
   a. 0.2 NTU more than 5 percent of the time within a 24-hour period; and
   b. 0.5 NTU at any time.

4. No stored wastewater or recycled water shall have a daily average pH less than 6.5 or greater than 10.0.

D. General Solids Disposal Specifications

Sludge means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screenings generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the facility. Biosolids refers to sludge that has undergone sufficient treatment and testing to qualify for reuse pursuant to Federal and State regulations as a soil amendment for agriculture, silviculture, horticulture, and land recycling.

1. Sludge and solid waste shall be removed from screens, grit removal systems, sumps, reactors, membranes, and ponds as needed to ensure optimal plant operation.

2. Treatment and storage of sludge shall be confined to the WRP and Crossroads Plant treatment facilities, and shall be conducted in a manner that precludes infiltration of waste constituents into soils in a mass or at concentrations that will violate the Groundwater Limitations of this Order.

3. Any storage of residual sludge, solid waste, and biosolids at the facility shall be temporary, and the waste shall be controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or at concentrations that will violate the Groundwater Limitations of this Order.

4. Residual sludge, biosolids, and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at disposal sites operated in accordance with valid waste discharge requirements issued by a regional water quality control board will satisfy this specification.

5. Use and disposal of biosolids shall comply with the self-implementing Federal regulations of 40 CFR 503, which are subject to enforcement by the USEPA, not the Regional Water Board. If during the life of this Order, the State accepts primacy for implementation of 40 CFR 503, the Regional Water Board may also initiate enforcement where appropriate.

E. Water Recycling Specifications

1. Application of recycled water shall be confined to the approved recycled water storage pond sites and land application areas as defined in this Order or new sites defined in RWERs that have been approved by the Executive Officer.

2. Recycled water shall be used in compliance with Title 22, Article 3, *Uses of Recycled Water* and this Order.

3. Public contact with recycled water shall be controlled through use of fences, signs, and/or other appropriate means. All use areas where recycled water is used that are accessible to the public shall be posted with signs that are visible to the public, in a size no less than 4 inches by 8 inches and include the following wording, "Recycled Water – Do Not Drink." The size and content of these signs shall be as described in Section 60310(g) of Title 22.

4. Recycled water controllers, valves, and similar appurtenances shall be affixed with recycled water warning signs, and shall be equipped with removable handles or locking mechanisms to prevent public access or tampering. Quick couplers, if used, shall be of a type, or secured in a manner, that permits operation only by authorized personnel. Hose bibs shall not be used.

5. Application of recycled water shall comply with the following setback requirements:

Setback Definition	Minimum Setback (feet)
Edge of land application area to domestic well.	50

Setback Definition	Minimum Setback (feet)
Wastewater/recycled water storage pond to domestic well.	100
Land application area to surface water or irrigation canal drainage course.[1]	50

[1] Excluding ditches used exclusively for tailwater return from the land application area and land application areas separated by levees or other physical barriers from surface waters or drainage courses.

6. Any use of recycled water shall comply with the following:
   a. Any irrigation runoff shall be confined to the recycled water use area, unless the runoff does not pose a public health threat and is authorized by the regulatory agency.
   b. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.
   c. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.
7. Any connection between the recycled water facilities and any potable water conveyance system, groundwater supply well, or surface water supply source for the purpose of supplementing recycled water shall be equipped with a DHS-approved backflow prevention device.
8. Application rates for recycled water shall not exceed agronomic rates considering the crop, soil, climate, and irrigation management system in accordance with the water balance submitted with the RWD.
9. Irrigation runoff (i.e., tailwater) shall be completely contained within the designated land application area and shall not enter any surface water drainage course or stormwater drainage system.
10. Irrigation with recycled water shall not be performed within 24 hours of a forecasted storm, during or within 24 hours after any precipitation event, nor when the ground is saturated.
11. Land application areas shall be managed to prevent breeding of mosquitoes. In particular:
    a. There shall be no standing water 48 hours after application of recycled water.
    b. Tailwater ditches must be maintained essentially free of emergent, marginal, or floating vegetation.
    c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store recycled water.

F. Groundwater Limitations

1. Release of waste constituents from any storage or treatment pond shall not cause groundwater to:

   a. Contain any of the following constituents in concentrations greater than listed or greater than natural background quality, whichever is greater. Note that natural background conditions have not yet been established for the land application areas and therefore the following limitations are interim limits.

Constituent	Units	Limitation
Boron	mg/L	0.7
Chloride	mg/L	106
Iron	mg/L	0.3
Manganese	mg/L	0.05
Sodium	mg/L	69
Total Coliform Organisms	MPN/100 mL	<2.2
Total Dissolved Solids	mg/L	450
Total Nitrogen	mg/L	10
Nitrite (as N)	mg/L	1
Nitrate (as N)	mg/L	10
Ammonia (as NH_4)	mg/L	1.5
Bromoform	µg/L	4
Bromodichloromethane	µg/L	0.27
Chloroform	µg/L	1.1
Dibromochloromethane	µg/L	0.37

   b. Exhibit a pH of less than 6.5 or greater than 8.4 pH units.

   c. Impart taste, odor, toxicity, or color that creates nuisance or impairs any beneficial use.

2. Release of waste constituents from the land application areas shall not cause groundwater under and beyond those areas (as determined by an approved well monitoring network) to contain any constituents in concentrations greater than ambient background conditions, and shall not cause or contribute to the violation of any Basin Plan narrative or numeric water quality objective.

G. Provisions

1. All of the following reports shall be submitted pursuant to Section 13267 of the California Water Code and shall be prepared as described in Provision G.4.

a. By **16 October 2006**, the Discharger shall apply for coverage for Order No. 97-03 DWQ, *Discharges of Stormwater Associated with Industrial Activities*.

b. By **13 December 2006**, the Discharger shall submit an *Operation and Maintenance Plan* (O&M Plan) for the wastewater treatment and application facilities. A copy of the O&M Plan shall be kept at the facility for reference by operating personnel. Key personnel shall be familiar with its contents. The O&M Plan shall provide the following:

i. Operation and Control of Wastewater Treatment - A description of the wastewater treatment equipment; operational controls; treatment requirements/effluent limitations; flow diagrams including valve/gate locations; operation of the treatment systems during start-up, normal operation, by-pass, shut-down, and draining procedures; potential operational problems including a troubleshooting guide.

ii. Sludge Handling - A description of the biosolids handling equipment, operational controls, control tests and observations related to process control, potential operational problems including a troubleshooting guide, and disposal procedures.

iii. Operation and Control of Recycled Water Distribution System – A description of the recycled water distribution system, operational controls, flow diagrams including valve gate locations; potential operational problems including a troubleshooting guide and backflow

iv. Personnel - Recommended staffing requirements, staff qualifications, training requirements and schedule, and operator certification requirements.

v. Maintenance – Maintenance procedures, equipment record system, scheduling and use of the maintenance record system, inventory system, special tools, warranty provisions and expiration dates, maintenance cost and budgeting system, maintenance schedule of all equipment including lubricants, filters, UV bulbs, etc.

vi. Emergency Response – A description of the vulnerability analysis including emergencies such as power outage, severe weather, or flooding. An equipment and telephone list for emergency personnel and equipment vendors. Coordination procedures with fire, police, and health department personnel, and an emergency operating plan.

vii. Safety – A general discussion of the hazards of collection systems, mechanical equipment, explosion, pathogens, oxygen deficiencies, chemical and electrical hazards, etc.

viii. Appendices – Shall include flow diagrams, valve/gate locations, copy of WDRs, miscellaneous form samples, manufacturers manuals, and a list of reference materials.

c. By **13 December 2006**, the Discharger shall submit an *Interim Sewer System Management Plan* (SSMP), which shall contain technical reports consistent with the requirements of the State Water Board General Order No. 2006-0003-DWQ. The following portions of the SSMP shall be submitted in the Interim SSMP

   a. Item D.13.ii, Organization.

   b. Item D.13.iv, Operation and Maintenance Plan.

   c. Item D.13.vi, Overflow Emergency Response Plan.

   d. Item D.13.xi, Communication Program.

d. By **13 December 2006**, the Discharger shall submit a *CWC Master Reclamation Report* that demonstrates compliance with CWC Section 13523.1. The documents shall address the following items:

   i. The Discharger shall establish and enforce rules or regulations for reclaimed water users, governing the design and construction of reclaimed water use facilities and the use of reclaimed water, in accordance with the uniform statewide reclamation criteria established pursuant to CWC Section 13521 (Title 22).

   ii. The Discharger shall conduct periodic inspections of the facilities of the reclaimed water users to monitor compliance by the users with the uniform statewide reclamation criteria established pursuant to Section 13521 and the requirements of the master reclamation permit.

e. **As part of any request** for an increased wastewater flow rate, the Discharger shall submit a report describing construction of an emergency storage pond and emergency bypass equipment at the WRP treatment facilities. The storage pond shall be sized to comply with the Emergency Storage requirements of Title 22 Section 60341.

f. By **2 June 2008**, the Discharger shall submit a *Stormwater Drainage Pipe Repair Report*. The report shall describe how the broken stormwater pipe located in the southern portion of Mossdale Landing (Finding No. 61) was repaired to prevent dewatering the area and controlling the local groundwater flow direction.

g. By **2 March 2009**, the Discharger shall submit a Background Groundwater Quality Study Report for facilities described in Findings No. 29 and 32 . For each groundwater monitoring parameter/constituent identified in the MRP, the report shall present a summary of monitoring data and calculation of the concentration in background monitoring wells. Determination of background quality shall be made using the methods described in Title 27, Section 20415(e)(10), and shall be based on data from at least eight consecutive quarterly groundwater monitoring events. For each monitoring parameter/constituent for each facility described in Finding No. 29, the report shall compare the calculated background concentration with the interim

numeric limitations set forth in Groundwater Limitation F.1.a. Where background concentrations are statistically greater than the interim limitations specified in Groundwater Limitation F.1.a, the report shall recommend final groundwater limitations which comply with Resolution No. 68-16 for the waste constituents listed therein. Subsequent use of a concentration as a final groundwater limitation will be subject to the discretion of the Executive Officer. For each monitoring parameter/constituent for each land application area described in Finding F.2, the report shall compare calculated background concentrations with downgradient concentrations. If downgradient concentrations are significantly greater then the report shall recommend measures such that the discharge will comply with Groundwater Limitation F.2.

h. By **31 August 2009**, the Discharger shall submit the *Final Sewer System Management Plan* (Final SSMP) that has been certified by the responsible public agency. The Final SSMP shall be consistent with the requirements contained in State Water Board General Order No. 2006-0003-DWQ. The Final SSMP may be updated in the future as the collection system is expanded. Revisions to SSMPs will be contained in the *Recycled Water Expansion Reports* (RWERs).

i. With respect to any groundwater monitoring well located within the WRP boundaries, land application areas, recycled water storage ponds, or future application or storage area, the following shall apply:

   i. **At least 90 days prior to the first** scheduled construction or destruction of any groundwater monitoring well the Discharger shall submit a *Master Groundwater Well Installation and/or Destruction Workplan* (Master Well Workplan). The Master Well Workplan shall be consistent with Attachment F: "*Requirements for Monitoring Well Installation Workplans and Monitoring Well Installation Reports*," the California Well Standards Bulletin 74-90, and the San Joaquin County Well Standards.

   ii. **At least 120 days prior** to the scheduled construction or destruction of **any** groundwater monitoring well, the Discharger shall submit a *Groundwater Well Project Description Addendum* that briefly describes the field methods that will be employed for installation and/or destruction of groundwater monitoring wells. Individual projects shall refer to the methods described in the Master Well Workplan and provide site specific information for each project.

      a. Each *Groundwater Well Project Description Addendum* shall describe any proposed expansion or change to the existing groundwater monitoring network specifically designed to ensure that background water quality at the expanded storage pond sites and land application areas is adequately characterized and any potential water quality impacts from the proposed discharge are detected. The system shall be designed to yield samples representative of the uppermost portion of the first aquifer underlying the expanded pond sites and land application areas. For any existing groundwater monitoring wells proposed for inclusion in the

monitoring network, a boring log and well construction detail shall be included in the *Groundwater Well Project Description Addendum*. If the information is determined to be adequate by Regional Water Board staff, the existing wells can be added to the monitoring network as appropriate. No wells shall be installed or destroyed until approval to proceed is obtained from Regional Water Board staff

iii. **Within 90 days of** obtaining approval of a *Groundwater Well Project Description Addendum* to construct or destroy a groundwater well, the Discharger shall submit a *Well Installation Report* compliant with and including the items listed in, the second section of Attachment F: *"Requirements for Monitoring Well Installation Workplans and Monitoring Well Installation Reports."* The report shall describe the activities and explain any deviation from the approved *Groundwater Well Project Description Addendum*. The report shall also include the boring log and well construction detail for any existing well that is added to the monitoring network.

j. With respect to any construction activities that are related to wastewater treatment, conveyance, or storage equipment that requires building department approval or permits, the following shall apply:

i. **At least 90 days prior** to submittal of any Recycled Water Expansion Report, the Discharger shall submit a *Design Report* for the facilities needed for the expansion. The report shall include specifications, design drawings, and construction quality assurance testing. The report shall demonstrate compliance with Chapter 3 (Water Recycling Criteria) of Title 22 and Articles 1 and 2 of Chapter 3 of the Title 17 of the CCR. The Design Report shall include written approval from DHS for all expanded recycled water systems consistent with CWC Section 13554.2(e).

ii. **Within 90 days of completing construction** of improvements that required a Design Report, the Discharger shall submit an *As-Built Report*. The As-Built Report shall document that the construction of all new or modified facilities were constructed with no significant changes from the Design Report. If significant changes did occur, they shall be documented.

k. **At least 90 days prior** to the proposed use of any new wastewater treatment equipment, recycled water storage ponds, or land application areas, not already approved for use as of the date of adoption of this Order, the Discharger shall submit a *Recycled Water Expansion Report* (RWER). The report shall include the following items:

i. A Form 200 for each property owner of the sites proposed for land application areas or recycled water storage ponds.

ii. Documentation that a final CEQA document analyzing the use for land application or recycled water storage ponds has been completed prior to the date of adoption of this Order, that the proposed use is consistent with the assumptions of the CEQA document, and that the mitigation measures included in the CEQA documentation have been implemented.

iii. A description of the groundwater monitoring system and a list of all wells included in the monitoring system.

iv. The results of a cross connection control test performed in accordance with the American Water Works Association (AWWA) and DHS guidelines.

v. An explanation of mitigation measures to be implemented if any new, expanded, or modified facilities are within a 100-year floodplain.

vi. An updated water balance projecting the wastewater flow capacity resulting from the planned expansion and demonstrating compliance with Discharge Specification B.18. The assumptions of the water balance shall be consistent with the descriptions in this Order or be more conservative.

vii. Water quality data from at least two groundwater sampling events separated by **90 to 180 days** at existing wells described in this Order, or that have been installed consistent with the *Master Groundwater Monitoring Well Workplan* and an approved *Groundwater Well Project Description Addendum(s)* for the new recycled water storage pond sites and/or land application areas. The wells must be specifically sited to monitor the groundwater beneath the new areas.

viii. Confirmation that the proposed land overlies shallow groundwater with an average TDS concentration of 1,000 mg/L or greater, unless a lower concentration is required by the Executive Officer.

ix. For each expansion of the wastewater treatment facilities beyond the 0.75 MGD initial capacity, the Discharger shall either apply for coverage or submit a Notice of Non Applicability for Order No. 97-03 DWQ, Discharges of Stormwater Associated with Industrial Activities.

x. For each expansion of the wastewater treatment facilities beyond the 0.75 MGD initial capacity, the Discharger shall obtain approval from DHS that the expansion is consistent with the Title 22 Engineering Report.

xi. Updates to the Interim SSMP that address all the items listed in Provision G.1.c above, or if the Discharger has completed the certification process described in D.14 of the State Water Board General Order No. 2006-0003-DWQ, provide recertification of the SSMP describing significant changes to the collection system and updates to the SSMP.

xii. Updates to the Master Reclamation Report that address all the items listed in Provision G.1.d above.

xiii. Confirmation that the emergency storage pond is adequate for the proposed increased flow as described in Provision G.1.e above.

xiv. Updates to the *Recycled Water Operations Plan* that was submitted under WDRs Order No. R5-2005-0045 (or at the Discharger's discretion, a new complete document). The Plan shall include the following elements:

a. Documentation of operational status of the wastewater treatment system, compliance with all Title 22 requirements, and completion of initial and final cross-connection control tests.

b. A description of the irrigation system operation to irrigate at agronomic rates and prevent spills and runoff of recycled water.

c. A description and schedule of the facility inspections to confirm proper operation.

d. Methods to contain and return tailwater to recycled water storage ponds or land application areas.

e. Training requirements for operators.

f. Emergency procedures to respond to spills and broken equipment incidents.

g. A cross-connection prevention plan that includes cross-connection testing (initial, final, and periodic).

h. An emergency cross-connection response plan.

i. A preventive maintenance program.

j. Forms for recording land application area inspections, preventive maintenance activities, etc.

k. The latest version of City's Water and Recycled Water Standards.

l. Confirmation that the expansion will comply with setbacks described in Water Recycling Specifications E.5.

m. General compliance with the Engineering Report approved by DHS. Any deviation from this report must be highlighted.

2. **At least 90 days prior** to termination or expiration of any lease, contract, or agreement involving storage, disposal or recycling areas, or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Regional Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.

3. If groundwater monitoring results show that the discharge of waste is causing groundwater to contain waste constituents in concentrations statistically greater than background water quality then, **within 120 days** of the request of the Executive Officer, the Discharger shall submit a *BPTC Evaluation Workplan* that sets forth the scope and schedule for a systematic and comprehensive technical evaluation of each component of the facility's waste treatment and disposal system to determine best practicable treatment and control for each waste constituent listed in the Groundwater Limitation F.1.a of this Order. The Workplan shall contain a preliminary evaluation of each component of the WRP and effluent disposal system and propose a time schedule for completing the comprehensive technical evaluation. The schedule to complete the evaluation shall be as short as practicable, and shall not exceed one year.

4. In accordance with California Business and Professions Code Sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for investigations and studies, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall bear the professional's signature and stamp.

5. The Discharger shall comply with Monitoring and Reporting Program No. R5-2006-____, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.

6. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated 1 March 1991, which are attached hereto and made part of this Order by reference. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."

7. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with the Effluent Limitations and other requirements specified in this Order.

8. The Discharger shall provide certified wastewater treatment plant operators in accordance with Title 23 of the California Code of Regulations, Division 3, Chapter 26.

9. As described in the Standard Provisions, the Discharger shall report promptly to the Regional Water Board any material change or proposed change in the character, location, or volume of the discharge.

10. Upon the reduction, loss, or failure of the sanitary sewer system resulting in a sanitary sewer overflow in addition to the measures described in the Overflow Emergency Response Plan described in the Discharger's SSMP, the Discharger shall take any

necessary remedial action to (a) control or limit the volume of sewage discharged, (b) terminate the sewage discharge as rapidly as possible, and (c) recover as much as possible of the sewage discharged (including wash down water) for proper disposal. The Discharger shall implement all applicable remedial actions including, but not limited to, the following:

a. Interception and rerouting of sewage flows around the sewage line failure.

b. Vacuum truck recovery of sanitary sewer overflows and wash down water.

c. Use of portable aerators where complete recovery of the sanitary sewer overflow is not practicable and where severe oxygen depletion is expected in surface waters.

d. Cleanup of sewage-related debris at the overflow site.

11. The Discharger shall report to the Regional Water Board any toxic chemical release data it reports to the State Emergency Response Commission **within 15 days** of reporting the data to the Commission pursuant to Section 313 of the "Emergency Planning and Community Right to Know Act of 1986."

12. The Discharger shall not allow pollutant-free wastewater to be discharged into the wastewater collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.

13. The Discharger shall submit to the Regional Water Board on or before each compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharger shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board in writing when it returns to compliance with the time schedule.

14. In the event of any change in control or ownership of the facility or wastewater disposal areas, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Regional Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved by the Executive Officer.

15. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or recession of this Order.

16. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.

17. The Regional Water Board will review this Order periodically and will revise requirements when necessary.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on __ September 2006.

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PAMELA C. CREEDON, Executive Officer

TRO: 9/1/06